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HC

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/931,615 09/16/97 KAWATA

T 041464-5018

EXAMINER

LM02/0425

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1800 M STREET NW
WASHINGTON DC 20036-5869

ART UNIT	PAPER NUMBER
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2743
DATE MAILED:

16
04/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/931,615

Applicant(s)

Kawata et al.

Examiner

Huyen Le

Group Art Unit
2743



☒ Responsive to communication(s) filed on Feb 15, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 2-9, 14-17, and 20-30 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 2-9, 14-17, and 20-30 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

1. The indicated allowability of claims 2-5, 20-21, 25 and 27 is withdrawn in view of the reference(s) to Sariti in view of Nakamura. Rejections based on the references follow.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elliptical frame and the magnetic circuit having elliptical shape, and the elliptical frame with the elliptical magnetic circuit formed by the plates and the magnet having a rectangular shape must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Objections

3. Claims 22, 24, 26 and 29 are objected to because of the following limitation:

Regarding claims 22, 24, 26 and 29, in lines 1-3, the repeated limitations of “the top plate ... its shorter axis” should be deleted . Appropriate correction is required.

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Claim Rejections - 35 USC § 112

4. Claims 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It's not clear how the elliptical magnetic circuit is formed by the top plate, the magnet and the back plate which have a rectangular shape.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 2-4, 6, 8-9, 15, 17, 20, 22-24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sariti (U.S. patent 3,079,472) in view of Nakamura (U.S. patent 4,969,196).

Regarding claims 4, 6, 15, 20 and 22-24, Sariti teaches a speaker unit which comprises a diaphragm (52), a cylindrical voice coil (50) secured on a center of the diaphragm, a rectangular frame (see the housing 48 in figures 1-2 and col. 2, lines 56-58), and a magnetic circuit formed by a rectangular top plate (12), a rectangular magnet (33) and a rectangular back plate (14) having an upright pole (24) on its center.

As shown in figures 1-3, the top plate (12), the magnet (33) and the backplate (14), each has a width (figure 2) that is equal to or narrower than the width of the rectangular frame in its shorter axis. Also, the top plate (12), the magnet (33) and the backplate (14), each has a length (figure 3) that is equal to or shorter than the length of the rectangular frame in its longer axis.

In addition, Sariti shows the cylindrical voice coil (50) which has a circular cross section (see the circular openings 16, 34, and 20 in figure 1, and the air gap 30 in figure 2).

Sariti does not specifically teach the diaphragm and the frame in an elliptical shape. However, Sariti does not restrict to any shape for the speaker system (col. 2, lines 56-59). Also, providing an oval or elliptical speaker is very well-known in the art.

Nakamura shows an oval or elliptical speaker (96, figures 11, 13).

Therefore, it would have been obvious to one skilled in the art to provide an elliptical shape, as taught by Nakamura, for the speaker of Sariti such as providing an elliptical diaphragm

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and a frame with an elliptical opening to receive the diaphragm for an alternate choice of providing a desired shape for the speaker.

Regarding claims 2 and 8, Sariti shows the frame structure, the top plate, the magnet and the back plate which are arranged in parallel relation with one another.

Regarding claims 3 and 9, Sariti do not teach that the speaker unit is installed on either side of a television display on a television set.

However, the examiner takes the Office Notice that providing a speaker unit to be installed on either side of a television is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the speaker unit of Sariti to be installed in either side of the television for applying the speaker system to an electronic device.

Regarding claim 15, as shown in the drawings, the magnetic circuit of Sariti has the same shape as the rectangular frame (also see col. 2, lines 56-59).

Regarding claims 17, 23 and 30, Sariti does not specifically show that the magnetic circuit has the shape as claimed. However, Sariti does not restrict to any shape for the magnetic circuit (col. 2, lines 56-59).

Further, the Applicant does not specifically disclose the advantages for the specific elliptical shape of the magnetic circuit. Therefore, it would have been obvious to one skilled in the art to provide any shape for the magnetic circuit of Sariti for an alternate choice.

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7. Claims 5, 7, 14, 16, 21 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sariti in view of Nakamura (U.S. patent 4,969,196) as applied to claims 4 and 6, respectively above, and further in view of Lee et al. (GP 2,278,251) or Numa (JP 355118299).

Regarding claims 5 and 7, Sariti in view of Nakamura do not teach a magnetic case as claimed. However, providing a magnetic case for housing the magnetic circuit is well-known in the art.

Lee or Numa shows a magnetic case (111 in Lee and 26 in Numa) as claimed.

Therefore, it would have been obvious to one skilled in the art to provide the magnetic case, as taught by Lee or Numa, for covering the magnetic circuit of Takahashi in view of Sariti to reduce the leakage magnetic flux.

Regarding claims 14, 16 and 21, Sariti in view of Nakamura do not teach a second magnet as claimed. However, it is very well-known in the art to provide a second magnet in the magnetic circuit of the speaker.

Lee or Numa teaches a second plate-shaped magnet as claimed in the magnetic circuit.. Therefore, it would have been obvious to one skilled in the art to provide the second magnet, as taught by Lee or Numa in the magnetic circuit of Sariti for reducing the leakage magnetic flux.

Regarding claims 25-26 and 28-29, Sariti in view of Namura include all the limitations as claimed as mentioned above in paragraph 2 of the Office Action.

Sariti in view of Nakamura do not teach a second magnet as claimed. However, it is very well-known in the art to provide a second magnet in the magnetic circuit of the speaker.

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Lee or Numa teaches a second plate-shaped magnet as claimed in the magnetic circuit.. Therefore, it would have been obvious to one skilled in the art to provide the second magnet, as taught by Lee or Numa in the magnetic circuit of Sariti for reducing the leakage magnetic flux.

Regarding claim 27, as shown in the drawings, the magnetic circuit of Sariti has the same shape as the rectangular frame (also see col. 2, lines 56-59).

Response to Arguments

8. Applicant's arguments filed 2/15/2000 and 09/15/99 have been fully considered but they are not persuasive.

Responding to the arguments, the examiner refers back to the Office Action. Further, the Applicant should note that Sariti does teach a rectangular shape for the speaker (see col. 2, lines 56-59).

The Applicant does not restrict to the rectangular shape or the elliptical shape for the frame and the magnetic circuit for the specific advantages. Further, Sariti does teach that the magnetic circuit can be rectangular or any other desired shape, and as shown in the drawings, the magnetic circuit (figures 1-2) has the same rectangular shape as the frame (48). Also, providing the elliptical shape or the rectangular for the speaker system is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide any shape for the speaker of Sariti in view of Nakamura such as the rectangular or elliptical shape for the frame and the magnetic circuit for an alternate choice.

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As shown in figure 2, the rectangular frame (48) of the Sariti speaker system has a width and a length. The top plate (12), the magnet (33) and the backplate (14), each has a width (figures 1-2) that is equal to or narrower than the width of the rectangular frame. Also, the top plate (12), the magnet (33) and the backplate (14), each has a length (figure 3) that is equal to or shorter than the length of the rectangular frame.

9. Applicant's arguments with respect to claims 2-9, 14-17 and 20-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Le whose telephone number is (703) 305-4844. The examiner can normally be reached on Monday through Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

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Or:

(703) 305-9508 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA.,
Sixth Floor (Receptionist).



HL
April 20, 2000



HUYEN LE
PRIMARY EXAMINER